

CLAIMS

1. (currently amended) A process for depositing a silica coating upon a heated glass substrate comprising the steps of:
 - a) providing a heated glass substrate having a surface upon which the coating is to be deposited; and
 - b) directing a precursor mixture comprising a radical scavenger, a silane, ammonia, oxygen and an inert carrier gas toward and along the surface to be coated, and reacting the mixture at or near the surface to form a silica coating on the surface of the glass substrate.
2. (canceled)
3. (original) The process for depositing a silica coating upon a glass substrate as claimed in claim 1, wherein the silane is monosilane.
4. (currently amended) The process for depositing a silica coating as claimed in claim [[2]] 1, wherein the radical scavenger gas in the precursor mixture is selected from the group consisting of ethylene and propylene.
5. (original) The process for depositing a silica coating as claimed in claim 4, wherein the radical scavenger gas is ethylene.
6. (original) The process for depositing a silica coating as claimed in claim 1, wherein the resultant coating on the glass substrate comprises less than about 1 atomic percent nitrogen.
7. (original) The process for depositing a silica coating as claimed in claim 1, comprising providing an inert carrier gas and adding the inert carrier gas to the precursor mixture, prior to directing the precursor mixture toward and along the surface to be coated.

8. (original) The process for depositing a silica coating as claimed in claim 7, wherein the inert carrier gas comprises at least one of nitrogen and helium.

9. (original) The process for depositing a silica coating as claimed in claim 1, wherein the precursor mixture comprises about 0.1-about 3.0 percent silane, about 1.5 – about 9 percent oxygen, about 1.5 – about 9 percent ethylene and about 7.5 – about 60 percent ammonia, with the remainder comprising an inert carrier gas.

10. (canceled)

11. (canceled)

12. (canceled)

13. (original) The process for depositing a silica coating as claimed in claim 9, wherein the precursor mixture comprises about 1.5 percent silane, about 6 percent oxygen, about 4.5 percent ethylene and about 15 percent ammonia, with the remainder comprising an inert carrier gas.

14. (original) The process for depositing a silica coating according to claim 1, wherein step b) comprises premixing the silane, ammonia, oxygen and the carrier gas to form the precursor mixture.

15. (original) The process for depositing a silica coating according to claim 1, comprising cooling the coated glass substrate to ambient temperature.

16. (currently amended) A process for depositing a silica coating upon a heated glass substrate in an on-line, float glass production process comprising the steps of:

a) providing a heated glass substrate having a surface upon which the coating is to be deposited; and

b) premixing monosilane, ammonia, oxygen and an inert carrier gas to form a precursor mixture, directing ~~[[a]]~~ the precursor mixture comprising a silane, ammonia, oxygen and an inert carrier gas toward and along the surface to be coated, and reacting the mixture at or near the surface to form a silica coating on the surface of the glass substrate.

17. (new) The process for depositing a silica coating upon a glass substrate as claimed in claim 16, wherein the precursor mixture further comprises a radical scavenger.

18. (new) The process for depositing a silica coating upon a glass substrate as claimed in claim 16, wherein the silane is monosilane.

19. (new) The process for depositing a silica coating as claimed in claim 17, wherein the radical scavenger gas in the precursor mixture is selected from the group consisting of ethylene and propylene.

20. (new) The process for depositing a silica coating as claimed in claim 19, wherein the radical scavenger gas is ethylene.

21. (new) The process for depositing a silica coating as claimed in claim 16, wherein the resultant coating on the glass substrate comprises less than about 1 atomic percent nitrogen.

22. (new) The process for depositing a silica coating as claimed in claim 16, comprising providing an inert carrier gas and adding the inert carrier gas to the precursor mixture, prior to directing the precursor mixture toward and along the surface to be coated.

23. (new) The process for depositing a silica coating as claimed in claim 22, wherein the inert carrier gas comprises at least one of nitrogen and helium.

24. (new) The process for depositing a silica coating as claimed in claim 16, wherein the precursor mixture comprises about 0.1-about 3.0 percent silane, about 1.5 – about 9 percent oxygen, about 1.5 – about 9 percent ethylene and about 7.5 – about 60 percent ammonia, with the remainder comprising an inert carrier gas.